

**REMARKS**

Applicants thank the Examiner for the thorough consideration given the present Application. Claims 1, 3, 5, 7, 8, 10, 12, and 14-28 are pending in the present Application. Claims 1 and 8 are independent claims.

**Allowable Subject Matter**

Claims 7 and 14 are objected to as being otherwise allowable claims dependent from rejected base claims. Applicants thank the Examiner for noting that the claims contain allowable subject matter, but believe that all pending claims are allowable.

**Claim Rejections - 35 U.S.C. § 103 – Belfatto and Connerney**

Claims 1, 3, 5, 8, 10, 12, 15, 16, 19, 20, 25, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 4,266,201 to Belfatto (hereafter “Belfatto”) in view of U.S. Patent 4,955,079 to Connerney (hereinafter “Connerney”). Insofar as it pertains to the presently pending claims, this rejection is respectfully traversed.

Belfatto teaches a system and method for improving the on/off ratio of a pulse modulator to reduce signal output during “off” periods. (Col. 1, lines 9-14). Specifically, Belfatto teaches mixing an inverted frequency carrier signal with a biased modulation input pulse to create pulse modulated output with “on” and “off” periods that correspond to input pulses from the modulation input source. (Col. 2, lines 33-46).

Connerney teaches a balanced subharmonic mixer that suppresses image and noise signals associated with RF signals, allowing the desired RF signal to be identified and processed. (Col. 1, lines 25-37).

### Claim 1

Claim 1 pertains to pulse modulation circuitry comprising, in pertinent part, “a branching means for receiving a pulsed signal from a pulse applying terminal and also receiving a local oscillation signal from a local oscillation wave input terminal.”

The Office Action asserts that Belfatto meets the above-quoted claim limitation by providing a first branching means for receiving a pulsed signal (Sole Fig. 38, 34) and a second branching means for receiving a local oscillation signal (Sole Fig. 16, 26, fc1). Applicants respectfully submit that this is a misreading and mis-construction of the claim language.

Independent claim 1 requires one branching means that receives both the pulsed signal and the local oscillation signal (see Fig. 1 of Specification). Belfatto does not teach a branching means that receives both signals, instead the signals in Belfatto are received by two separate branching means connected by a mixer. Applicants therefore respectfully submit that Belfatto does not teach or suggest “a branching means for receiving a pulsed signal from a pulse applying terminal and also receiving a local oscillation signal from a local oscillation wave input terminal” as required by independent claim 1. Applicants further submit that Connerny is not relied upon, nor can it properly be relied upon, to remedy this deficiency of Belfatto with respect to independent claim 1.

### Claim 8

Independent claim 8 pertains to pulse modulation circuitry comprising, in pertinent part, “a branching means for receiving a pulsed signal from a pulse applying terminal, and for outputting a pulsed signal to a pulse output terminal.”

The Office Action asserts that Belfatto meets the above-quoted claim limitation by providing a first branching means for receiving a pulsed signal (Sole Fig. 38, 34) and a third branching means for outputting a pulsed signal (Sole Fig., 54, 66, 56) for outputting a pulsed

signal to an output terminal. Applicants respectfully submit that this is a misreading and misconstruction of the claim language.

Independent claim 8 requires one branching means that both receives a pulsed signal from an input terminal and outputs a pulsed signal to an output terminal (see Fig. 10 of Specification). Belfatto does not teach a branching means that both receives and outputs, instead the signals in Belfatto are received from an input by one branching means, and output to an output terminal by another branching means, with the two separate branching means connected by a mixer. Applicants therefore respectfully submit that Belfatto does not teach or suggest “a branching means for receiving a pulsed signal from a pulse applying terminal, and for outputting a pulsed signal to a pulse output terminal” as required by independent claim 8. Applicants further submit that Connerny is not relied upon, nor can it properly be relied upon, to remedy this deficiency of Belfatto with respect to independent claim 8.

#### Claims 3, 5, 10, 12, 15, 16, 19, 20, 25, and 26

Applicants respectfully submit that claims 3, 5, 10, 12, 15, 16, 19, 20, 25, and 26 are allowable at least by virtue of their dependency from independent claims 1 and 8, respectively.

#### Summary

Applicants respectfully submit, at least in view of the above, that neither Belfatto nor Connerny, taken either alone or in combination (assuming the references may be combined, which Applicants do not admit) teach or suggest the inventions claimed in independent claims 1 and 8, and all claims depending therefrom. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Claim Rejections – 35 U.S.C. § 103 – Dependent Claims

Claims 17 and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Belfatto in view of Connerny, in further view of Publication WO03038992 by Yamada (hereafter “Yamada”).

Claims 21 and 22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Belfatto in view of Connerny, in further view of U.S. Patent Publication 20020022466 by Dobrovolny (hereafter “Dobrovolny”).

Claims 23 and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Belfatto in view of Connerny, in further view of U.S. Patent 5995819 to Yamaji (hereafter “Yamaji”).

Claims 27 and 28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Belfatto in view of Connerny, in further view of U.S. Patent 5530928 to Wheatley III (hereafter “Wheatley”).

Insofar as they pertain to the presently pending claims, these rejections are respectfully traversed.

Applicants respectfully submit that dependent claims 17, 18, 21 – 24, 27, and 28 are allowable at least by virtue of their dependency on independent claims 1 and 8. Applicants submit that none of Yamada, Dobrovolny, Yamaji, or Wheatley are relied upon in the Office Action, nor can they be properly relied upon, to remedy the defects of Belfatto with respect to independent claims 1 and 8. Applicants therefore respectfully submit that none of Belfatto, Connerney, Yamada, Dobrovolny, Yamaji, or Wheatley taken alone or in combination (assuming the references may be combined – which Applicants do not admit) teach or suggest the inventions claimed in independent claims 1 and 8, and all claims depending therefrom. Accordingly, reconsideration and withdrawal of these rejections is respectfully requested.

**Conclusion**

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Naphtali Y. Matlis (Reg. No. 61,592) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By 

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